```
                 ┌──────────────────────┐                          ┌──────────────┐
                 │  Select Reference    │                          │  Select an   │
                 │  Reach (stable       │                          │  Impaired    │
                 │  stream type)        │                          │  Reach       │
                 └──────────────────────┘                          └──────────────┘
```

Flowchart of the bedload transport prediction process:

- **Select Reference Reach (stable stream type)** → branches to **Measure Bankfull Discharge (velocity, width, depth, area)** and **Measure: Cross Section, Slope, Bed Material**
- **Select an Impaired Reach** → **Measure: Cross Section, Slope, Bed Material**
- **If multiple channels, divide into cells for separate calculations** ↔ **Measure: Cross Section, Slope, Bed Material**
- **Measure Bankfull Discharge (velocity, width, depth, area)** → **Measure Bedload Transport at Bankfull Stage (kg/s)** and → **Regionalized Dimensionless Flow Duration Curve**
- **Measure Bedload Transport at Bankfull Stage (kg/s)** → **Obtain Reference Dimensionless Bedload Sediment Rating Curve**
- **Check Predicted vs Measured Bankfull Velocity** → **Measure Bankfull Discharge** ; ← **Dimensionless Hydraulic Geometry by Stream Type (Reference Reach only)**
- **Measure: Cross Section, Slope, Bed Material** → **Dimensionless Hydraulic Geometry by Stream Type (Reference Reach only)**
- **Obtain Reference Dimensionless Bedload Sediment Rating Curve** → **Bedload Sediment Rating Curve**
- **Dimensionless Hydraulic Geometry by Stream Type (Reference Reach only)** → **Unit Stream Power (Reference)** and **Unit Stream Power (Impaired)**
- **Bedload Sediment Rating Curve** and **Unit Stream Power (Reference)** → **Establish Bedload Transport vs Unit Stream Power (Reference)**
- **Unit Stream Power (Impaired)** → **Revised Sediment Transport vs Stream Power (Impaired)**
- **Establish Bedload Transport vs Unit Stream Power (Reference)** → **Revised Sediment Transport vs Stream Power (Impaired)** and → **Flow Duration Curve**
- **Revised Sediment Transport vs Stream Power (Impaired)** → **Flow Duration Curve**
- **Regionalized Dimensionless Flow Duration Curve** → **Flow Duration Curve**
- **Flow Duration Curve** → **Total Annual Bedload Transport (Reference)** ↔ **Total Annual Bedload Transport (Impaired)**

Flowchart 12. Prediction of Bedload Transport Changes Due to Alteration of Channel Dimension and/or Slope. Use When Reference and Impaired Reaches Have the Same Bankfull Discharge.